AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Currently Amended) A heat-resistant glass fiber which has a composition comprising consisting essentially of, by weight %, 56 to 58.5% of SiO_2 , 12 to 17% of Al_2O_3 , 16 to 27% of CaO_3 , 1 to 9% of CaO_3 , 0 to 1% of CaO_3 and 0 to 1% of CaO_3 as the entirety of the fiber and containing neither CaO_3 nor CaO_3 nor CaO_3 nor CaO_3 nor CaO_4 and which has a surface layer portion made of a silicic glass having an CaO_3 content of at least 90% by weight, wherein the fiber substantially retains its flexibility when heated for ten hours at CaO_3 .
- 2. (Original) The heat-resistant glass fiber of claim 1, wherein the surface layer portion made of a silicic glass having an SiO_2 content of at least 90% by weight has a thickness of 0.1 to 1.0 μ m.
- 3. (Original) The heat-resistant glass fiber of claim 1, wherein a difference ΔT between a spinning temperature which is a melting temperature of a glass having a viscosity of 100 Pa·s and a liqluidus temperature is at least 30°C.
- 4. (Original) A process for the production of the heat-resistant glass fiber recited in claim 1, which comprises treating the surface of a glass fiber which has a composition comprising, by weight %, 56 to 58.5% of SiO_2 , 12 to 17% of Al_2O_3 , 16 to 27% of CaO_3 , 1 to 9% of MgO, 0 to 1% of Na_2O_3 and 0 to 1% of K_2O_3 and containing neither B_2O_3 nor F_2 , with a mineral acid.

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- 5. (Original) The process of claim 4, wherein the treatment is carried out by immersing the glass fiber in an aqueous solution containing, as the mineral acid, 1 to 10% by weight of at least one acid selected from HCl, H₂SO₄ or HNO₃ at a temperature of 0 to 90°C.
- 6. (Currently Amended) A heat-resistant glass fiber which has a surface layer portion at least 0.01 μ m thick, made of silicic glass having an SiO₂ content of at least 90%, the balance of the glass fiber having a composition eomprising essentially of, by weight %, 56 to 58.5% of SiO₂, 12 to 17% of Al₂O₃, 16 to 27% of CaO, 1 to 9% of MgO, 0 to 1% of Na₂O and 0 to 1% of K₂O as the entirety of the fiber and containing neither B₂O₃ nor F₂ wherein the fiber substantially retains its flexibility when heated for ten hours at 900°C.